Wireless Interface Evolution 3
2 & 4 Wire versions
915MHz

User manual

Préambule / Preamble / Präambel / Preambolo / Preámbulo

- Ce guide décrit les fonctionnalités du système VOKKERO, ses options et ses accessoires. Il explique comment le configurer pour permettre une communication de type conférence entre plusieurs utilisateurs.

- This guide describes the functionality of the system VOKKERO, options and accessories. It explains how to configure it to allow a conference-type communication between multiple users.

- Diese Anleitung beschreibt die Funktionalität des Systems Vokkero, Optionen und Zubehör. Es erklärt, wie man es konfigurieren, um eine Konferenz-Art der Kommunikation zwischen mehreren Benutzern zu ermöglichen.

- Questa guida descrive la funzionalità del sistema VOKKERO, opzioni e accessori. E spiega come configurare in modo da permettere una comunicazione di tipo conferenza tra più utenti.

- Esta guía describe la funcionalidad del sistema Vokkero, opciones y accesorios. En él se explica cómo configurarlo para permitir una comunicación de tipo conferencia entre múltiples usuarios.

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ENGLISH

Safety Information

In the following explanations, is designated by «PRODUCT» one of the references ARF7712AA or ARF7713AA.

The product is manufactured according to the current state of the art and in accordance with recognized safety rules in force in the labor code.

The general safety requirements must be met during all phases of use and repair of equipment. Failure to follow rules or written warnings in this manual is contrary to the requirements of safe use and operation of the product.

As a user of this product, it is necessary to strictly follow in your work environment, all warnings and instructions needed to perform safely on the PRODUCT.

Be sure to read this manual completely before putting into operation the PRODUCT. This manual is part of the PRODUCT and comes with it. The rules for the prevention of risks and accidents as safety rules must be observed!

Explosive atmosphere
Do not use the product in presence of flammable gas and smoke. The use of the equipment in this environment is dangerous.

Modifications/repairs
Before opening the product for any intervention, it must be completely disconnected from the power supply sector. It is forbidden to replace components with power cable connected.

Environment
Do not operate the Product in an uncontrolled environment where the temperature is below -20°C or above +40°C, this will damage the equipment. Keep equipment away from moisture, do not spill liquid on the equipment.
Use of the product is intended only for indoor at an altitude less than 2000 meters.

Disclaimers

WARNING: The equipment must be connected to an electrical installation complying with the standards in force in your country (ex : NFC 15-100 in France). It must be equipped with protection against overcurrent, overvoltage, ground fault (rating 16A max).

WARNING: all the equipment connected to the product must be in accordance with EN 60950-1 Ed 2006 or their standard product.

WARNING: A disconnecting means shall be provided to disconnect the product from the network supply. If the plug of the power cable is seen as an isolating device, it must be easily accessible.

WARNING: Do not install the equipment near a heat source or near a source of moisture.

WARNING: For your safety, it is imperative that before any technical intervention on the equipment it is turned off and not connected to the mains.

WARNING: The security of the ARF7710AA is provided for use in the intended purpose. In case of an external AC/DC power supply, use only following model : Power supply Ref BCH15 24V 625mA - FRIWO 15.1436. This power supply is delivered with the equipment.

WARNING: The security of the PRODUCT is provided for use in the intended purpose. Maintenance can only be performed by qualified personnel.

WARNING: "E.U.T comply with EN60950-1 (2006) until 2000 meters of altitude if used with an external switch mode power supply complying to the standard EN60950-1 (2006) and complying paragraph 2.5 (limited power sources)."

Waste disposal by users in private households in the European Union

This symbol on the product or its packaging indicates that this product should not be dumped with your other household waste. Instead, it is your responsibility to dispose of your waste by bringing them to a designated collection point for recycling electrical and electronic equipment. Collection and recycling of your waste at the time of disposal will help conserve natural resources and to ensure environmentally sound recycling and human health. For more information on the recycling center closest to your home, contact the local city office, service disposal of garbage or the shop where you purchased the product.

Meaning of the symbol class 2

Device fully protected by double insulation.

Cables connections

Please refer to ¶ 2.2 & 2.4

Technical Specifications

Parameter	Min	Max	Comments
Audio frequency response	300Hz	3KHz	3.4KHz cut-off
Audio distortion		< 5 %	digital CODEC and noise filter
Active AGC & Limiter response time		about 100 ms	-
Power supply 4 Wire version	20V DC	32V DC	24V DC with provided BCH015 power supply adaptor
Power supply 4 Wire version	20V DC	32V DC	power supplied from network
Operating temperature range	-20°C	+40°C	Humidity <75%
Storage temperature range	-40°C	+85°C	-
Dimensions	Lenght 173mm	Width 110mm	Height 78mm

Note : ARF7712AA can be powered by mains AC / DC (Ref BCH16 24V 625mA - FRIWO 15.1436)

References

Part number	Reference	Description
ARF7712AA	VOKKER004-IG-WI	4 WIRE INTERFACE EVO3 915MHz
ARF7713AA	VOKKER002-IG-WI	2WIRE INTERFACE EVO3 915MHz

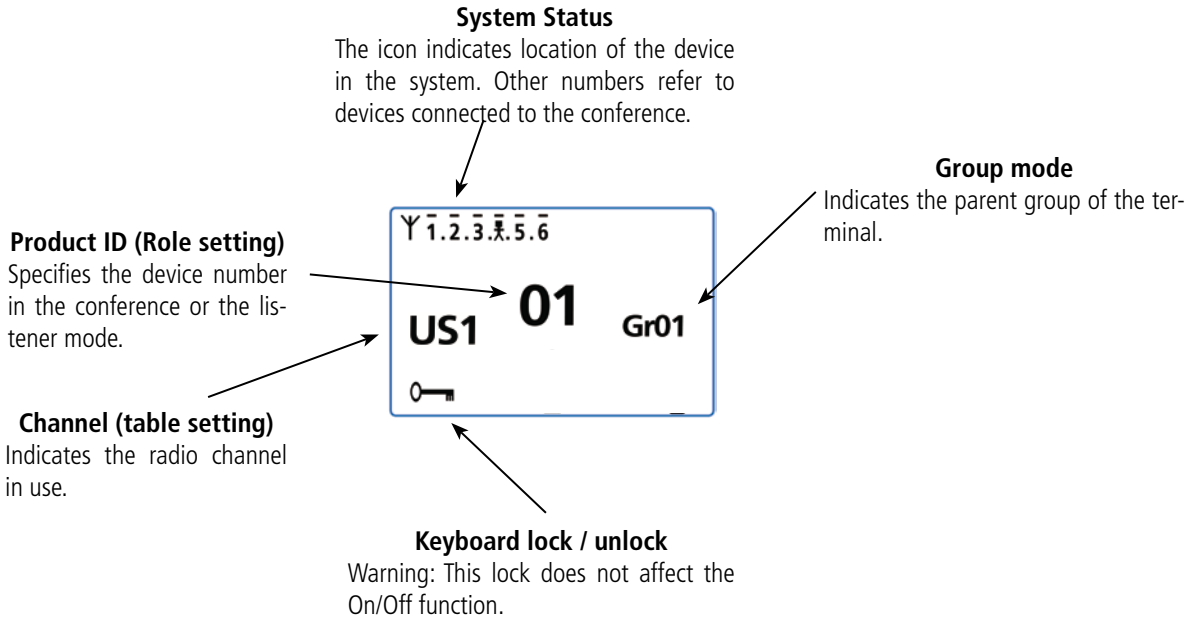
Introduction

The operations described below enable you to implement your Vokkero Wireless Interface communication system quickly and easily.

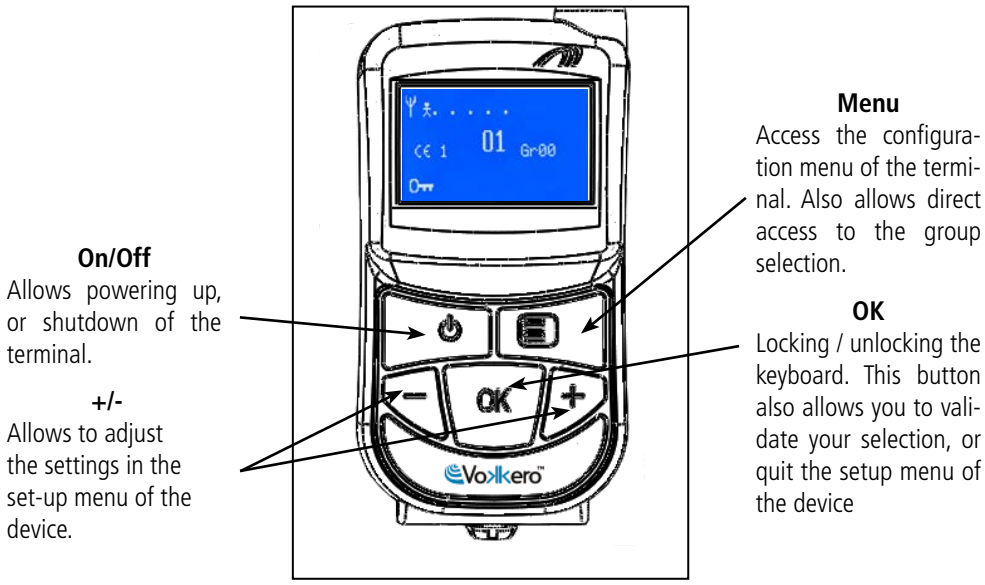
1. Wireless Interface «WI»

1.1. Description of the screen icons

The screen displays key information for the user when using his or her terminal.


System Status
The icon indicates location of the device in the system. Other numbers refer to devices connected to the conference.
Group mode
Indicates the parent group of the terminal.
Product ID (Role setting)
Specifies the device number in the conference or the listener mode.
Channel (table setting)
Indicates the radio channel in use.
Keyboard lock / unlock
Warning: This lock does not affect the On/Off function.
1.2.3.5.6
01
US1
Gr01

1.2. Description of the keypad keys


On/Off
Allows powering up, or shutdown of the terminal.
+/-
Allows to adjust the settings in the set-up menu of the device.
Menu
Access the configuration menu of the terminal. Also allows direct access to the group selection.
OK
Locking / unlocking the keyboard. This button also allows you to validate your selection, or quit the setup menu of the device
01
Gr00
OK
Vokkero

The VOKKERO Wireless Interface allows the connection of VOKKERO Audio Conference Device to any kind of audio wired network. VOKKERO Audio Conference Devices become mobile parts inside a fixed intercom audio system.

The VOKKERO Wireless Interface is usable exactly as a VOKKERO Audio Conference Device with the following specifications :

Wireless Interface «4 wire» version
Audio connections are dedicated to "4 wire" balanced Input & Output.
Power supply is based on an AC/DC adapter (Ref BCH015 - 24V 625mA - FRIWO 15.1436)

Wireless Interface «2 wire» version
Audio connections are dedicated to "2 wire" network.
Power is supplied by «2 wire» network (no battery – no external PSU).

2 Wire compatible intercoms
- ASL®, TECHPRO®, CLEARCOM® full compatible
- TELEX RTS® (only Channel 2 of the TELEX RTS® intercom is compatible)

The product is available in an easy to use and well designed dedicated metal & plastic enclosure. The 20 cm right angle antenna is connected through a SMA connector.

2. Wireless Interface Set-up

VOKKERO Wireless Interface acts as a single point in the VOKKERO Audio Communication network. The setup of the product is exactly the same than the setup of any VOKKERO Audio Conference Device.

Please refer to VOKKERO Audio Conference Device User Guide for complete information.

Note: It is recommended to setup the VOKKERO Wireless Interface as Role N°1 in the VOKKERO network.

2.1. Specific features of the Wireless Interface

Although the Wireless Interface works as a Vokkero transceiver, it has a few specific functions described below:

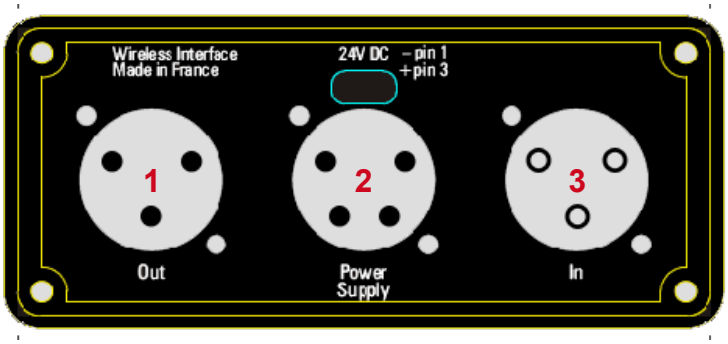
On/Off: the Wireless Interface «WI» automaticaly starts when the power is supplied. No need to use the On/Off button. This button can be used to switch off the WI and to restart it when it has been manualy switched off and that it has not been unplugged from the main.

Filter Menu: the Filter menu can be found on the Options Menu of the terminal. By default the filter is set on «Generic»

- Important note : when the Vokkero network is set to US1 channel table, the WI filter must stay set on «Generic»

Fast Menu: the Fast menu authorises the access to the «Fast Channel» and «none» choices only.

2.2. «4 Wire» Front interface



1 : Male XLR : Analog Audio output :

Pinout : 1 = GND 2 & 3 = Balanced audio
- 600 Ohms balanced & transformer isolated
- Min 150 mV (-25 dBV) / Max 10Vpp (10 dBV)

For connection, use an external connector Female XLR3F (Amphenol AX3F) with the corresponding signals (see above)

2 : Male XLR: power supply input :

Pinout: 1 = GND 3 = V DC
- 20 to 32 V DC / 200 mA max

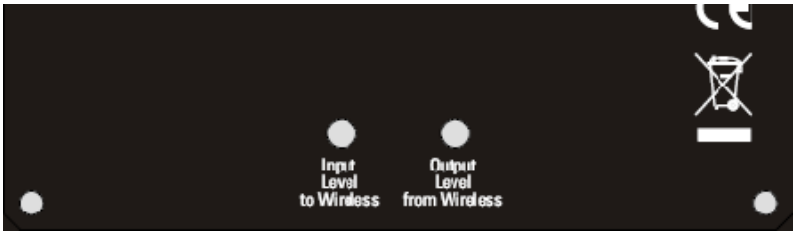
For connection, use an external connector Female XLR4 (Amphenol AX4F) with the corresponding signals (see above)

3 : Female XLR : Analog Audio input :

Pinout: 1 = GND 2 & 3 Balanced audio
- 600 Ohms balanced & transformer isolated
- Min 1.5Vpp (-10dBV) / Max 20Vpp (17 dBV)

For connection, use an external connector Male XLR3 (Amphenol AX3M) with the corresponding signals (see above)

2.3. «4 Wire» Back interface



Input Level to Wireless

- Min 150 mV (-25 dBV) / Max 10Vpp (10 dBV)

Set-up procedure : turn 15 times to the left to ensure the «0» value on the potentiometer

Turns > right	V in Max (Vpp)	V in Max (V)	V in Max (dBV)
1 turn	20	7,07	17,0
2 turns	10	3,53	11,0
3 turns	6,5	2,30	7,2
4 turns	4,8	1,70	4,6
5 turns	3,8	1,34	2,6
6 turns	3,1	1,10	0,8
7 turns	2,7	0,95	-0,4
8 turns	2,3	0,81	-1,8
9 turns	2,1	0,74	-2,6
10 turns	1,9	0,67	-3,5
11 turns	1,7	0,60	-4,4
12 turns	1,6	0,57	-5,0
13 turns	1,5	0,53	-5,5
14 turns	1,4	0,49	-6,1
15 turns	1,4	0,35	-9,1

Output Level from Wireless

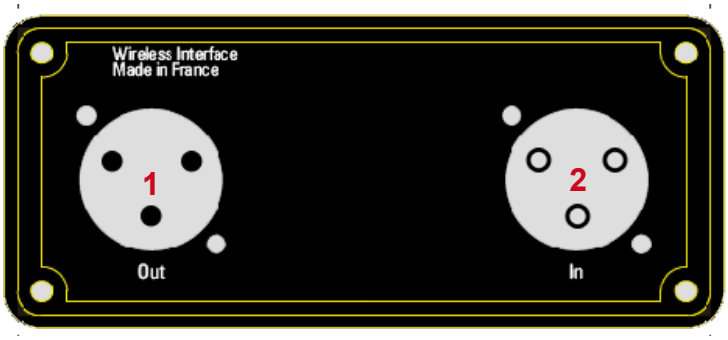
- Min 1.5Vpp (-10dBV) / Max 20Vpp (17 dBV)

Set- up procedure : turn 15 times to the left to ensure the «0» value on the potentiometer

Turns > right	V out Max (Vpp)	V out Max (V)	V out Max (dBV)
1 turn	0,15	0,05	-25,5
2 turns	0,7	0,25	-12,1
3 turns	1,07	0,38	-8,4
4 turns	1,43	0,51	-5,9
5 turns	1,75	0,62	-4,2
6 turns	2,05	0,72	-2,8
7 turns	2,39	0,84	-1,5
8 turns	2,73	0,96	-0,3
9 turns	3,15	1,11	0,9
10 turns	3,7	1,31	2,3
11 turns	4,44	1,57	3,9
12 turns	5,34	1,89	5,5
13 turns	6,56	2,32	7,3
14 turns	8,68	3,07	9,7
15 turns	10,5	3,71	11,4

Antenna connector
- SMA Female
- 868 / 915 MHz

2.4. «2 Wire» Front interface



1 : Male XLR : «2 WIRE» network connection (replication):

Pinout : 1 = GND 2 = DC supply 3 = Audio In/Out
- 20V to 32 VDC power supply coming from network

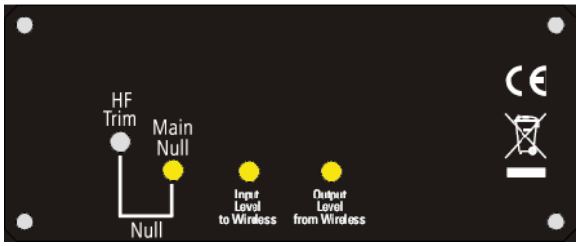
For connection, use an external connector Female XLR3 (Amphenol AX3F) with the corresponding signals (see above)

2 : Female XLR : «2 WIRE» network connection (main):

Pinout : 1 = GND 2 = DC supply 3 = Audio In/Out
- 20V to 32 VDC power supply coming from network

For connection, use an external connector Male XLR3 (Amphenol AX3M) with the corresponding signals (see above)

2.5. «2 Wire» Back interface



Input Level to Wireless
- Min 150 mV (-25 dBV) / Max 10Vpp (10 dBV)

Null
- Input / Output decoupling for echo cancellation

Output Level from Wireless
- Min 1.5Vpp (-10dBV) / Max 20Vpp (17 dBV)

Antenna connector
- SMA Female
- 868 / 915 MHz

3. Accessories

3.1. Antennas

The «WI» must be used with the antennas supplied by Adeunis-RF. The references of these antennas are :

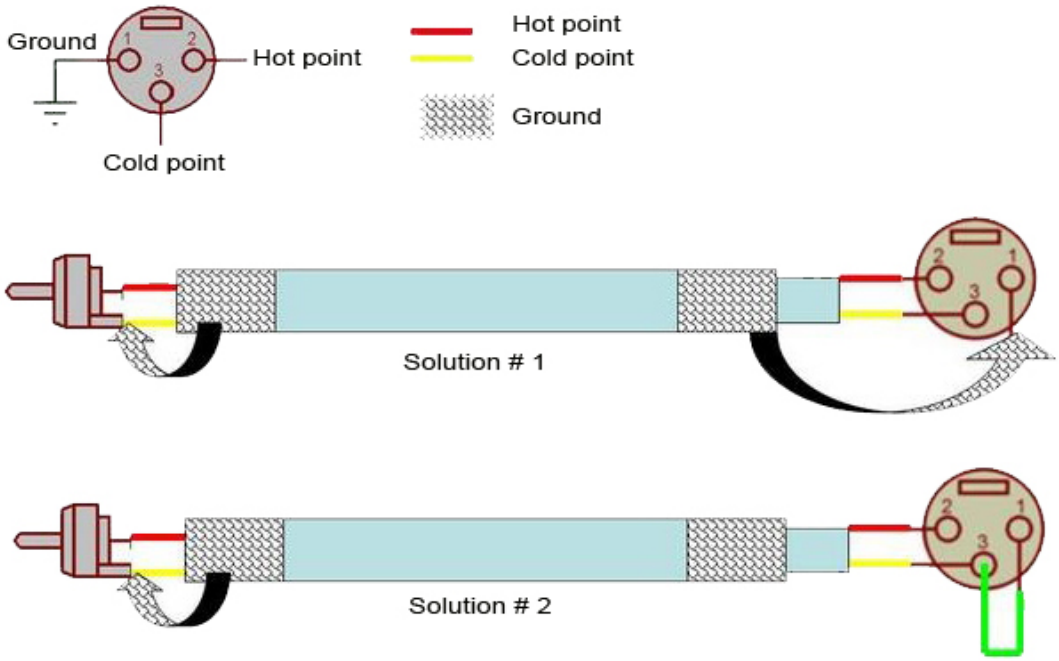
- ACC-ANT-10133 right angle 800-900MHz Antenna
- LPRS ANT-900MR
- ACC-ANT-10144 Panorama 3 meters remote Antenna with clipper- 800-900MHz

3.2. Power Supply adaptor

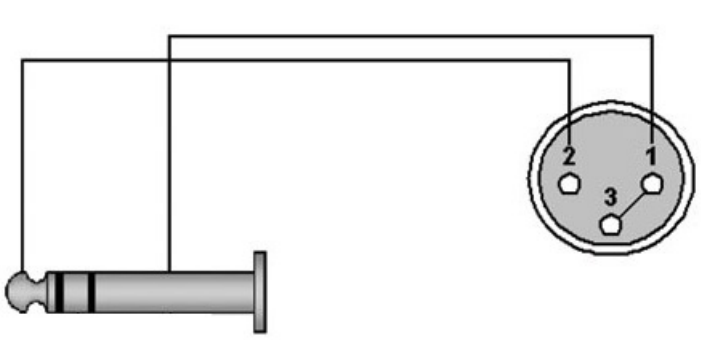
The «4 Wire» Wireless Interface is delivered with a power supply adaptor referenced BCH015 (24V 625mA - FRIWO 15.1436). This Power supply adaptor must be used with the wireless interface. Adeunis-RF cannot garantee the proper functionning with other models.

4. Schematics

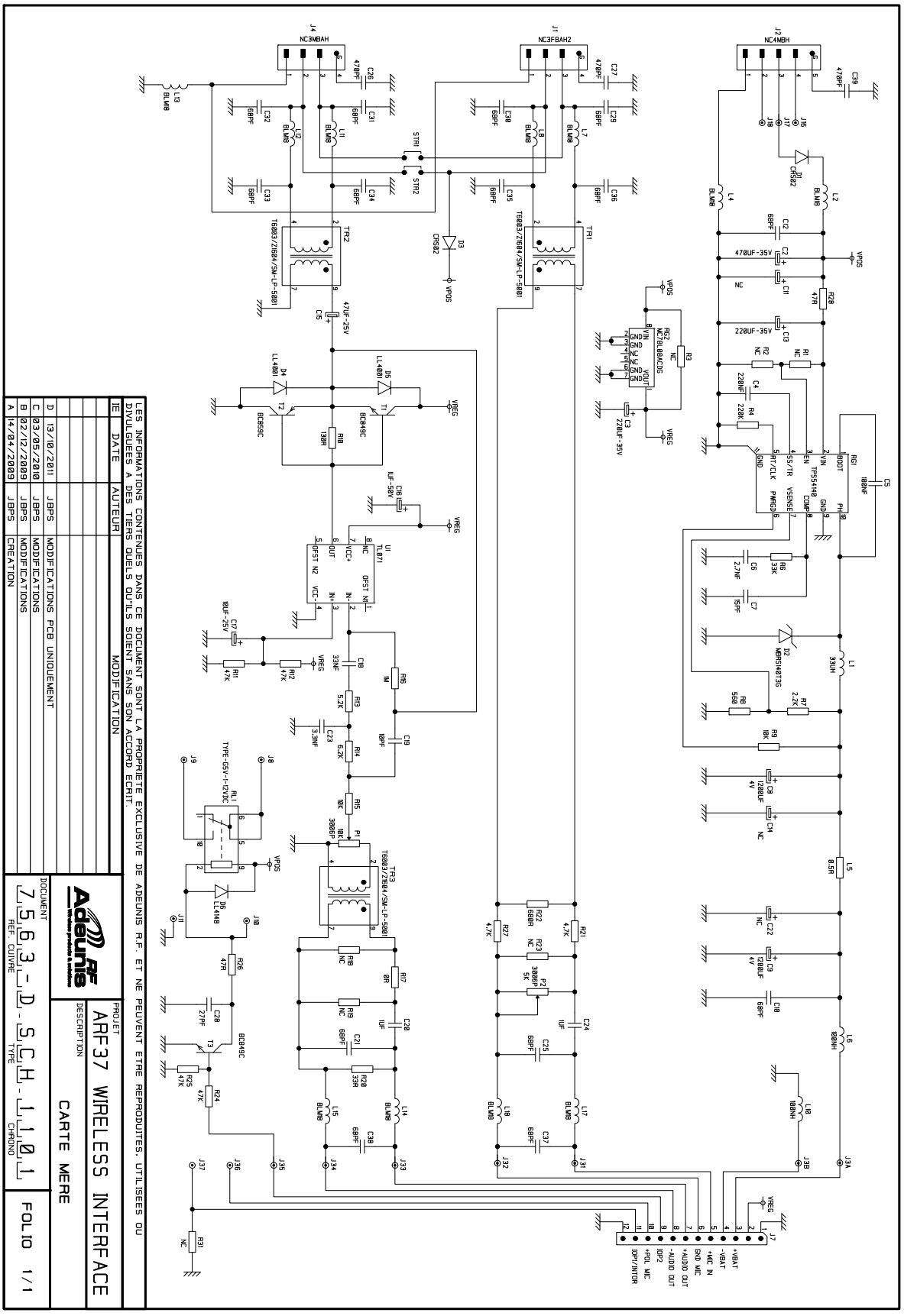
4.1. XLR to RCA cable



4.2. Laptop Inpout or Output Jack to XLR



4.3. «4 wire» Wireless interface schematic



Compliance to FCC US/CAN

- This device complies with part 15 of the FCC rules and Industry Canada licence-exempt RSS standard(s).
- Operation is subject to the following two conditions: (1). this device may not cause Harmful interference, and (2). this device must accept any interference received, including interference that may cause undesired operation of the device.

- However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :
  - Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.

- CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY ADEUNIS RF COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

  WARNING !
- FCC Radiation Exposure Statement:
- This portable equipment with its antenna complies with FCC's RF radiation exposure limits set forth for an uncontrolled environment. To maintain compliance follow the instructions below;

- 1. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- 2. Avoid direct contact to the antenna, or keep it to a minimum while using this equipment.

- Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.
- L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

- Cependant, il n'existe aucune garantie que des interférences ne se produiront pas dans une installation particulière. Si cet équipement provoque des interférences nuisibles à la réception radio ou télévision, qui peut être déterminé en mettant l'équipement hors tension, l'utilisateur est encouragé à essayer de corriger l'interférence par un ou plusieurs des mesures suivantes:
  - Réorienter ou déplacer l'antenne de réception.
  - Augmenter la distance entre l'équipement et le récepteur.
  - Brancher l'équipement dans une prise sur un circuit différent de celui auquel le récepteur est connecté.
  - Consulter le revendeur ou un technicien radio / TV.

- TOUTES MODIFICATIONS NON EXPRESSEMENT APPROUVEES PAR ADEUNIS RF PEUT ANNULER L'AUTORISATION D'UTILISATION DU MATERIEL.

ATTENTION !
Déclaration FCC d'exposition aux radiations:
Cet équipement portatif et son antenne est conforme à l'exposition aux rayonnements RF, dans les limites définies par la FCC, dans environnement non contrôlé. Pour maintenir la conformité veuillez suivre les instructions ci-dessous;

1. Cet émetteur ne doit pas être co-localiser ou fonctionner conjointement avec une autre antenne ou transmetteur.
2. Eviter le contact direct à l'antenne, ou le réduire au minimum lors de l'utilisation de l'équipement.

Identification
- FFC ID : U3Z-ARF7672
- CANADA IC : 7016A-ARF7672

Product reference :
USA/CANADA : ARF 7672AA / AN / AS / DA / DN / DS / DT / DU / DV / EA / EF / FA / GA

Authorised representative in Canada

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